

ABSTRACT OF THE DISCLOSURE

A method and apparatus of constructing a hardware architecture for transform functions is disclosed, which uses a single-input-parallel-output method for processing operations. The transform function has operations of multiplication, path-selection, and accumulation to be executed. The
5 fixed-one-input multipliers first multiply an input signal by all transform coefficients. Then a path-selection unit determines correct signal paths and delivers product results to the corresponding accumulators for processing accumulation. Finally, multipliers perform the multiplications of the
10 accumulated values and a constant to obtain output signals.